STATEMENT OF BASIS (AI No. 31135)

for draft Louisiana Pollutant Discharge Elimination System permit No. LA0005711 to discharge to waters of the State of Louisiana.

THE APPLICANT IS: City of Lafayette
Louis Doc Bonin Electric Generating Station
P.O. Box 4017-C
Lafayette, LA 70506

ISSUING OFFICE: Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

PREPARED BY: Molly McKean

DATE PREPARED: April 29, 2008

1. PERMIT STATUS

A. Reason For Permit Action:

Permit reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term

B. NPDES permit - NPDES permit effective date: N/A
NPDES permit expiration date: N/A

C. LPDES permits – LA0005711
LPDES permit effective date: October 1, 2003
LPDES permit expiration date: September 30, 2008

D. Date Application Received: April 10, 2008

2. FACILITY INFORMATION

A. FACILITY TYPE/ACTIVITY - steam electric power plant

The Louis Doc Bonin Power Plant is an existing, gas-fired steam electric power plant. The facility is owned and operated by the City of Lafayette/ Lafayette Utilities System (COL/LUS). COL/LUS now owns several peaking plants. As a result, the Louis Doc Bonin Plant is seldom used and rarely, if ever, used at full capacity. The facility has a gross generating capacity of 295 MW.

B. FEE RATE
1. Fee Rating Facility Type: minor
2. Complexity Type: IV
3. Wastewater Type: III
4. SIC code: 4911

C. LOCATION - 1120 Walker Road, Lafayette, Lafayette Parish
Latitude 30° 14' 08", Longitude 92° 02' 49"

3. OUTFALL INFORMATION

Outfall 001

Discharge Type: intermittent discharge of cooling tower blowdown, once-through cooling water, previously monitored boiler blowdown, previously monitored low volume wastewater, and stormwater
Treatment: none
Location: at the point of discharge from the southwestern edge of the facility into the Walker Road Ditch prior to mixing with any other waters
Flow: 1.4 MGD
Discharge Route: Coulee Mine via local drainage, thence into the Vermilion River

Outfall 101

Discharge Type: intermittent discharge of boiler blowdown
Treatment: none
Location: at the point of discharge from the boilers located along the west side of the main plant building prior to mixing with any other waters
Flow: 0.022 MGD
Discharge Route: Coulee Mine via local drainage, thence into the Vermilion River

Outfall 201

Discharge Type: intermittent discharge of low volume wastewater
Treatment: none
Location: at the point of discharge from the floor drain collection system from the main plant building prior to mixing with any other waters
Flow: 0.022 MGD
Discharge Route: Coulee Mine via local drainage, thence into the Vermilion River

Outfall 002

Discharge Type: intermittent discharge of cooling tower blowdown, once through cooling water, and stormwater
Treatment: none
Location: at the point of discharge from the southeast corner of the plant yard, prior to mixing with any other waters
Flow: 0.2 MGD
Discharge Route: Coulee Mine via local drainage, thence into the Vermilion River

4. RECEIVING WATERS

STREAM - Coulee Mine via local drainage, thence into the Vermilion River

BASIN AND SEGMENT - Vermilion-Teche Basin, Segment 060801

DESIGNATED USES - a. primary contact recreation
b. secondary contact recreation
c. propagation of fish and wildlife
d. agriculture

WATER QUALITY CHARACTERISTICS

A. TSS (15%), mg/L: 10.1
B. Average Hardness, mg/L $CaCO_3$: 105.75
C. Critical Flow, cfs: 0.1
D. Mixing Zone Fraction: 1
E. Harmonic Mean Flow, cfs: 1

Stream data information in A – E for Subsegment 060801, based on the following: LAC 33:IX Chapter 11; Recommendation(s) from the Engineering Section. Hardness and 15% TSS data come from random site number 2527 located at the bridge on Dugas Road, 0.35 miles west of Highway 182, Lafayette, Louisiana.

5. TMDL STATUS

Subsegment 060801, Vermilion River - Headwaters at Bayou Fusilier-Bourbeaux junction to New Flanders (Ambassador Caffery Bridge, Hwy. 3073, is not listed on LDEQ's Final 2006 303(d) list as impaired. However, subsegment 060801 was previously listed as impaired for Phosphorus, Nitrogen (Nitrate + Nitrite as N), Organic Enrichment/Low DO, Pathogen Indicators, Suspended Solids/Turbidity/Siltation, and Carbofuran for which the below TMDLs have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDLs and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDLs have been established for subsegment 060801:

To date, the following TMDLs have been completed: *Vermilion River Dissolved Oxygen and Nitrogen TMDL* (Federal Register Notice: Volume 66, Number 66, pages 18087-18089 (4/5/2001)), *Vermilion River Fecal Coliform TMDL* (Federal Register Notice: Volume 66, Number 66, pages 18087-18089 (4/5/2001)), *TMDL for TSS, Turbidity and Siltation for the 15 subsegments in the Vermilion River Basin* (Federal Register Notice: Volume 67, Number 85, pages 22080 - 22082 (5/2/2002)) , *TMDL for the Pesticide Carbofuran in the Mermentau and Vermilion Teche - River Basins* (Federal Register Notice: Volume 67, Number 55, pages 13144 - 13145 (3/21/02)).

As per the February 29, 2000 Delist (Federal Register Notice: Vol. 65, Num. 173, pages 54032-54034, 9/6/2000), assessment of new data and information shows this segment is meeting water quality standards for Phosphorus. Therefore, requirements for Total Phosphorus will not be placed in this permit.

Carbofuran is NOT among the effluent characteristics for discharges from this facility; therefore the discharge should have no adverse impact on the existing uses of the receiving water body nor should it cause or contribute to the violation of state water quality standards.

Suspended solids/turbidity/siltation are among the effluent characteristics listed for discharges from this facility, however as per the EPA's TMDL *Siltation for the 15 Subsegments in the Vermilion*

River Basin, point source loads are so small as to be insignificant, and because effective policies are in place to limit TSS discharges, no specific reductions from point sources are required. The discharge for this facility should not cause or contribute to the violation of water quality standards for TSS in the receiving stream.

Organic enrichment/low DO and Nitrate + Nitrite (as N) are among the effluent characteristics for discharges from this facility, however as per the EPA's *Vermilion River Dissolved Oxygen and Nitrogen TMDL*, the limits apply to sanitary discharges, and process outfalls of food processors and seafood processors. This facility does not discharge sanitary wastewater or food processing wastewater. Therefore, no limits are established by the TMDLs.

Pathogen Indicators are among the effluent characteristics for discharges of treated sanitary wastewater, however as per *The Vermilion River Fecal Coliform TMDL*, there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL. This facility does not discharge sanitary wastewater, therefore no limitations are included for the fecal coliform parameter.

6. PROPOSED EFFLUENT LIMITS

BASIS - See Rationale below.

CHANGES FROM EXISTING PERMIT –

1. Water quality-based zinc limitations for Outfalls 001 and 002 are updated based on revised information.
2. Flow and temperature monitoring frequencies for all outfalls have been reduced from continuously to 1/week. The facility is no longer operated on a routine basis.

7. COMPLIANCE HISTORY/COMMENTS

A. OEC – There are no recent compliance orders or inspection reports on file.

B. DMR Review/Excursions – DMRs submitted for the previous two years were reviewed. The following excursions were noted.

Date	Parameter	Outfall	Reported Value	Permit Limits
3/08	TOC	002	103 mg/l	50 mg/l
9/07	Iron	101	1.23 mg/l	1.0 mg/l
9/07	Iron	101	3.27 mg/l	1.0 mg/l
8/06	Iron	101	1.26 mg/l	1.0 mg/l
2/06	Iron	101	1.08 mg/l	1.0 mg/l
2/06	Iron	101	1.73 mg/l	1.0 mg/l

8. EXISTING EFFLUENT LIMITS

Outfall 001 – continuous discharge of cooling tower blowdown , once through cooling water and previously monitored effluent

Effluent Characteristic	Discharge Limitations		Monitoring Frequency
	Monthly Average	Daily Maximum	
Flow	Report	Report	continuous
Temperature	97 °F	106 °F	continuous
Chlorine, F.A.	0.2 mg/l	0.5 mg/l	1/week
TOC	---	50 mg/l	1/month
Oil & Grease	---	15 mg/l	1/month
Zinc,Total	0.23 mg/l	0.55 mg/l	1/week
Chromium, Total	0.2 mg/l	0.2 mg/l	1/week
pH	6.0 su (min)	9.0 su (max)	1/week

Outfall 101 – continuous discharge of boiler blowdown

Effluent Characteristic	Discharge Limitations		Monitoring Frequency
	Monthly Average	Daily Maximum	
Flow	Report	Report	1/day
TSS	30 mg/l	100 mg/l	1/week
Oil & Grease	15 mg/l	20 mg/l	1/week
Iron,Total	1.0 mg/l	1.0 mg/l	1/week
pH	6.0 su (min)	9.0 su (max)	1/week

Outfall 201 – continuous discharge of low volume wastewater

Effluent Characteristic	Discharge Limitations		Monitoring Frequency
	Monthly Average	Daily Maximum	
Flow	Report	Report	1/day
TSS	30 mg/l	100 mg/l	1/week
Oil & Grease	15 mg/l	20 mg/l	1/week
pH	6.0 su (min)	9.0 su (max)	1/week

Outfall 002 – continuous discharge of cooling tower blowdown and intermittent discharge of stormwater and once through cooling water

Effluent Characteristic	Discharge Limitations		Monitoring Frequency
	Monthly Average	Daily Maximum	
Flow	Report	Report	Continuous
Temperature	98 °F	110 °F	Continuous
Chlorine, F.A.	0.2 mg/l	0.5 mg/l	1/week
TOC	---	50 mg/l	1/month
Oil & Grease	---	15 mg/l	1/month
Zinc, Total	0.24 mg/l	0.57 mg/l	1/week
Chromium,Total	0.2 mg/l	0.2 mg/l	1/week
pH	6.0 su (min)	9.0 su (max)	1/week

9. ENDANGERED SPECIES

The receiving waterbody, Subsegment 060801 of the Vermilion-Teche Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 24, 2007 from Boggs (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

10. HISTORIC SITES

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

11. TENTATIVE DETERMINATION

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in the application.

12. PUBLIC NOTICES

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

Rationale for City of Lafayette

1. Outfall 001 – intermittent discharge of cooling tower blowdown, once-through cooling water, previously monitored boiler blowdown, previously monitored low volume wastewater, and stormwater (estimated flow is 1.4 MGD)

Effluent Characteristic	Discharge Limitations		Reference
	Monthly Average	Daily Maximum	
Flow	Report	Report	See below
Temperature	97 °F	106 °F	See below
FAC	0.2 mg/l	0.5 mg/l	See below
TOC	---	50 mg/l	See below
Oil & Grease	---	15 mg/l	See below
Zinc, Total	0.18 mg/l	0.42 mg/l	See below
Chromium, Total	0.2 mg/l	0.2 mg/l	See below
pH	6.0 su (min)	9.0 su (max)	See below

Treatment: none

Monitoring Frequency: Flow and temperature shall be monitored 1/week. FAC shall be monitored once per week with the sampling representative of periods of chlorination. TOC & Oil & Grease shall be monitored once per month based on LDEQ stormwater guidance. Total Zinc, Total Chromium, and pH shall be monitored once per week based on the current LPDES permit.

Limits Justification:
Flow, temperature, free available chlorine (FAC), and pH limits were established in the previous LPDES permit based on the Steam Power Plant effluent limitation guidelines promulgated in 40 CFR 432.12. Part II shall contain the following language, "There shall be no discharge of polychlorinated biphenyls such as those commonly used in transformer fluid." This requirement is based on 40 CFR 432(12)(b)(2). Based on 40 CFR 432.12(b)(8), "Free available chlorine may not be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available chlorine at any one time unless the utility can demonstrate to the State that the units in a particular location cannot operate at or below this level of chlorination."

TOC and Oil & Grease limits are retained from the previous LPDES permit. These limits are based on LDEQ stormwater guidance.

Total Chromium BAT limits are retained from the previous permit. They are based on 40 CFR 432.13(d)(1).

Total Zinc limits are water-quality based effluent limitations. In accordance with 40 CFR 122.44(d)(1)/LAC 33:IX.2701.D.1, the existing (or potential) discharge was evaluated in accordance with the Permitting Guidance Document for Implementating Louisiana Surface Water Quality Standards to determine whether pollutants would be discharged at levels which will cause, have the reasonable potential to cause, or contribute to an excursion of any state water quality standard. Technology-based limitations for Total Zinc established in 40 CFR 423.13.d.1 were screened against Louisiana Surface Water Quality standards and more stringent limitations were determined necessary to maintain water quality in the receiving stream. Calculations, results, and documentation are given in Appendix A-1.

2. Outfall 101 – intermittent discharge of boiler blowdown (estimated flow is 0.022 MGD)

Effluent Characteristic	Discharge Limitations		Reference
	Monthly Average	Daily Maximum	
Flow	Report	Report	See below
TSS	30 mg/l	100 mg/l	See below
Oil & Grease	15 mg/l	20 mg/l	See below
Iron,Total	1.0 mg/l	1.0 mg/l	See below
pH	6.0 su (min)	9.0 su (max)	See below

Treatment: none

Monitoring Frequency: All parameters shall be monitored once per week.

Limits Justification: Flow, TSS, Oil & Grease, and pH limits are retained from the previous LPDES permit. These limits are based on the steam power plant effluent limitation guidelines in 40 CFR 432.12(b)(1) & (3). Part II shall contain the following language, "There shall be no discharge of polychlorinated biphenyls such as those commonly used in transformer fluid."

Total Iron limitations are retained from the previous LPDES permit due to reported excursions for this parameter in the previous two years.

3. Outfall 201 - low volume wastewater (estimated flow is 0.022 MGD)

Effluent Characteristic	Discharge Limitations		Reference
	Monthly Average	Daily Maximum	
Flow	Report	Report	See below
TSS	30 mg/l	100 mg/l	See below
Oil & Grease	15 mg/l	20 mg/l	See below
pH	6.0 su (min)	9.0 su (max)	See below

Treatment: none

Monitoring Frequency: weekly for all parameters

Limits Justification: Flow, TSS, Oil & Grease, and pH limits are retained from the previous LPDES permit. These limits are based on the steam power plant effluent limitation guidelines in 40 CFR 432.12(b)(1) & (3). Part II shall contain the following language, "There shall be no discharge of polychlorinated biphenyls such as those commonly used in transformer fluid".

4. Outfall 002 – intermittent discharge of cooling tower blowdown, once through cooling water, and stormwater (estimated flow is 0.2 MGD)

Effluent Characteristic	Discharge Limitations		Reference
	Monthly Average	Daily Maximum	
Flow	Report	Report	See below
Temperature	98 °F	110 °F	See below
FAC	0.2 mg/l	0.5 mg/l	See below
TOC	---	50 mg/l	See below
Oil & Grease	---	15 mg/l	See below
Zinc, Total	0.18 mg/l	0.43 mg/l	See below
Chromium,Total	0.2 mg/l	0.2 mg/l	See below
pH	6.0 su (min)	9.0 su (max)	See below

Treatment: none

Monitoring Frequency: Flow and temperature shall be recorded 1/week. FAC shall be monitored once per week with the sampling representative of periods of chlorination. TOC & Oil & Grease shall be monitored once per month based on LDEQ stormwater guidance. Total Zinc, Total Chromium, and pH shall be monitored once per week based on the current LPDES permit.

Limits Justification: Flow, temperature, free available chlorine (FAC), and pH limits were established in the previous LPDES permit based on the Steam Power Plant effluent limitation guidelines promulgated in 40 CFR 432.12. Part II shall contain the following language, "There shall be no discharge of polychlorinated biphenyls such as those commonly used in transformer fluid." This requirement is based on 40 CFR 432.12(b)(2). Based on 40 CFR 432.12(b)(8), "Free available chlorine may not be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available chlorine at any one time unless the utility can demonstrate to the State that the units in a particular location cannot operate at or below this level of chlorination."

TOC and Oil & Grease limits are retained from the previous LPDES permit. These limits are based on LDEQ stormwater guidance.

Total Chromium BAT limits are retained from the previous permit. They are based on 40 CFR 432.13(d)(1).

Total Zinc limits are water-quality based effluent limitations. In accordance with 40 CFR 122.44(d)(1)/LAC 33:IX.2701.D.1, the existing (or potential) discharge was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards to determine whether pollutants would be discharged at levels which will cause, have the reasonable potential to cause, or contribute to an excursion of any state water quality standard. Technology-based limitations for Total Zinc established in 40 CFR 423.13.d.1 were screened against Louisiana Surface Water Quality standards and more stringent limitations were determined necessary to maintain water quality in the receiving stream. Calculations, results, and documentation are given in Appendix A-2.

BAT Best Available Technology Economically Achievable
BPJ Best Professional Judgement

BCT	Best Conventional Pollutant Control Technology
su	Standard Units

STORM WATER POLLUTION PREVENTION PLAN (SWP3) REQUIREMENT

A SWP3 is included in the permit because in accordance with LAC 33:IX.2511.A.1, storm water discharges shall not be required to obtain an LPDES permit "... except... discharges associated with industrial activity." In accordance with LAC 33:IX.2511.B.14.a-k, facilities classified as SIC code 4911 are considered to have storm water discharges associated with industrial activity.

The SWP3 shall be prepared, implemented, and maintained within (6) months of the effective date of the final permit. The plan should identify potential sources of storm water pollution and ensure the implementation of practices to prevent and reduce pollutants in the storm water discharges associated with industrial activity at the facility (see Narrative Requirements for the AI).

316b

This facility is not subject to 316b requirements. The facility does not operate a surface water intake.

APPENDIX A:
WATER QUALITY SCREEN CALCULATIONS AND EXPLANATIONS